THE VETERINARY RECORD

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Professor Macqueen's Address.

"Our medical schools have but one day in the year to observe" says *The British Medical Journal*. "The first of October is their only festival and they wholly fail to make the most of it." What precisely our contemporary requires we fail to gather. There are many medical schools and the various inaugural addresses seem to us to touch every question and to afford a most varied display of wisdom and literary art. Certainly there is not much ceremony, but we hardly think a solemn procession with a formal swearing-in of students would be an improvement on existing arrangements. The Journal confesses "there is a wealth of wisdom, truth, and good advice among all these addresses," yet it adds "something is wrong with them, some want of freshness, brevity, directness, simplicity."

We venture to think the introductory lecture at Camden Town this year is quite exempt from the criticism of the medical journal. It was at any rate fresh, direct and simple. It contained an amount of common sense flavoured with dry cynical humour that impressed the audience most favourably. Our report gives a fair idea of its matter but fails to represent its manner. Only those who heard it are able to do it justice. The Council of the Royal College of Veterinary Surgeons should read it carefully, for there are suggestions as to examinations and as to the subjects of examination which must be considered if we are to retain the confidence of students and teachers.

Bayer's Operation.

We published last week a translation from the German of an important operation, and we reproduced some illustrations from the magazine containing the article. In doing so we were unwittingly guilty of an injustice to Mr. Jno. A. W. Dollar who has purchased the copyright of a work on surgery edited by Bayer and Frohner. This work is not yet finished—only two of the five volumes which constitute the whole production having appeared. Professor Frohner as co-editor has of course a right to utilise long quotations, and his article which Mr. Eadie translated consisted chiefly of an extract from Bayer's work. By reproducing this we infringed Mr. Dollar's copyright, and what is worse we gave a very wrong impression of the illustrations by copying badly printed blocks from the magazine. We have had, through the courtesy of Mr. Dollar, an opportunity of seeing the originals, and we can assure our readers that when the translation appears its illustrations will be beautifully clear, and not at all like the hazy copies accompanying Mr. Eadie's translation. We should be sorry to think that any harm would result to Mr. Dollar from our having unknowingly trespassed upon his property, and we feel assured that with this explanation the only effect will be to make practitioners look forward to the time when another valuable addition to our literature is available.

AN OBJECT LESSON.

Last week we had to defend the veterinary profession from a charge of superfluity. An ignorant and narrow minded surgeon in attempting a defence of the Army Medical Service ventured upon the assertion that the Army Veterinary Department was a branch of the service which might be dispensed with and safely entrusted to the amateur attention of medical officers out of employment. How a man with pathological training could ever have been led into such a childish position passes the comprehension of sane adults.

Not long have we had to wait for demonstration of veterinary importance, and the illustration covers a much wider sphere than the inanities of an obscure army surgeon. It proves to demonstration the folly and short sightedness of governmental neglect and ignorance. It demonstrates with pitiful force the results of ignoring expert knowledge, and it logically ought to make an impression on high State officials that should lead to a new era in veterinary appreciation.

Some five years ago the cattle-plague was imported into Zanzibar and ravaged the East Coast of Africa. Colonel Lugard with admirable prescience at once recognised the danger and stated that he disease would inevitably spread. With almost prophetic intuition be recorded his conviction that the spread of the disease would destroy the ruminants of the Continent and would not be checked until it reached Cape Colony. He foretold that famine would follow the rinderpest, and that the starving nations would rise in revolt against the civilization that introduced a plague which left them destitute. Colonel Lugard went further, and suggested the use of the only means to check the catastrophe—the employment of a few veterinary surgeons who understood the suppression of disease. No notice was taken of this intelligent warning. Rinderpest spread, the wealth and food of the natives was destroyed. The disease reached Rhodesia and futile measures of repression were commenced only to provoke the nations into rebellion. War and all its savage horrors followed, but disease spread further south and now has invaded the Transvaal and Cape Colony. When it will cease no one knows. What it will cost is now only being recognised. And all this awful loss because veterinary aid was not called in when the focus of infection was small and might have been stamped out! Ruin, starvation, rebellion, war and all its horrors for want of intelligent recognition of veterinary science! Surely no such frightful negligence will be again permitted, but it can only be prevented by a generous and prudent recognition of the necessity of veterinary

direction before disease has made its appearance. Had there been intelligent veterinary aid available in Zanzibar when Colonel Lugard recognised the dangers ahead, the whole of the South African Continent might have been saved from the murders and starvation which have disorganised for years one of Britain's most hopeful acquisitions.

Now it is too late to do more than repair the evils which have resulted, but the object-lesson will have been lost if governments fail to recognise how easily thousands of lives and millions of money might have been saved by a small expenditure at the onset and by the employment of veterinary talent in every district to prevent disease instead of curing or suppressing it.

On October 1st *The Times* correspondent telegraphs from Cape Town—"October 15 has been appointed as a day of fasting, humiliation and prayer owing to the spread of rinderpest." Thirty years ago we had "humiliation and prayer" in England over the spread of rinderpest, but it availed nothing until the priest was supplemented by the veterinarian.

In Cape Colony they have a veterinary staff capable of dealing with the disease and we advise the authorities to give their experts a free hand. Fortunately the Colony has no Board of Agriculture with clerks and soldiers to mislead it, and although rinderpest is more formidable than swine-fever we may hope that success will attend the efforts of the veterinary staff in South Africa and an example be set to the muddling amateurs that pretend to guard the interest of stock-owners in Britain.

On October 2nd *The Times* correspondent again telegraphs from Cape Town and offers further illustration of the wide-spreading effects of uncontrolled disease amongst stock. This is what he says—"In consequence of the rise in the price of meat owing to the rinderpest a strong agitation has arisen in favour of abolishing the duty of 2d. per pound on frozen meat. Australian supplies will be necessary in order to prevent a famine. The dearness of food generally is inducing an angry discussion on the class of topics which relates to a customs union." Here we have the whole social and political basis of South Africa disturbed by a disease of cattle which might have been prevented by expert direction and action some four years ago.

The veterinary profession is only a small body and too weak in numbers to force its importance on the State. But it possesses an expert knowledge unknown to any other class, and there are times in the history of the country when the logic of events demonstrates its importance with irresistible power. In 1866 England was compelled to acknowledge veterinary skill by the ravages of cattle-plague. In 1896 South Africa will be forced, by the same disease, to look to us for guidance and salvation.

Is it too much to expect that in 1897 swine-fever will force the home government to acknowledge that only trained veterinarians can cope with animal diseases? We have no desire to trespass on the domain of other men, but we do insist that in our sphere we should have justice done us.

CASES AND ARTICLES.

WHITE LEAD POISONING IN CALVES.

By J. H. Parker, M.R.C.V.S., Faringdon.

I was called on Sunday, September 6th, to see some calves the property of a local farmer.

History.—One calf which died on the previous Wednesday, had been dressed by the men on the farm, and as they could not find anything wrong with it the carcase had been eaten by them without any ill effects.

I found one calf lying on its side, tympanitic, grunting, pulseless, evidently on the point of death. We killed this calf, and the post-mortem showed body well developed and apparently healthy. The small intestines had a peculiar blue look, and the veins were much injected. The contents of the omasum were very dry and caked, and the layers between the leaves were covered with a black coating. Contents of rumen were semi-fluid, and at termination of the œsophagus we found a lot of what I took to be foreign beans. They were irregularly quadrangular in shape and each bean had 6 to 8 black spots on the surface; they were very friable and of a white mealy consistence. The symptoms shown by the three calves remaining alive were: coats staring, backs arched, haggard expression on faces, grinding of teeth, and salivation; total anorexia, constipation. One calf reeled when walking. Temperatures normal. Thinking the beans might have something to do with the cause I sent them to Professor Penberthy who replied that he had found the same things both in health and disease.

On the owner questioning the men, one of the grooms told him he had thrown some white stuff which had been lying in the saddle room for years, on to the manure heap, thinking it was of no value and harmless. On a search being made only a little white lead remained on the heap, and the man thought they must have eaten about a pound of it. The treatment consisted of 6oz of mag. sulph. to each calf, but they all died.

TUBERCULOSIS.

I have read the three articles on this subject which have recently appeared in *The Record*. Messrs. Macgillivray, Ironside, and Hurndall, all seem to think there is some antagonism between the observations made in "practice" and those made by veterinary surgeons in laboratories and slaughter-houses. Now most scientific men look upon clinical work and laboratory work as equally essential in directing us to the truth. In natural outbreaks of disease there are many difficulties due to the surroundings, to the accidental circumstances which complicate the case and to the wide variations dependent upon the health, strength, and idiosyncrasy of individual animals. In the laboratory it is possible to exclude many confusing conditions, and thus on special points to arrive

at a conclusion with greater exactness than on a farm or in a stable. It is very important for us as practitioners to get at all the truth about tuberculosis, and I venture to think we shall do so more largely if we treat with due respect every opinion and every method. It is very necessary also to express our views clearly and not to use words in different senses. It is essential to any good result that quotations from other men should be correct, and that when the views of others are stated in our own words we should be careful to honestly and exactly express what the other party really says or believes.

The question which seems specially to divide us just now is—the method in which tuberculosis is spread from animal to animal. There is no division of opinion as to the contagious nature of the disease. We are all agreed that tuberculosis may be spread by ingestion of tuberculous material and that by cohabitation diseased animals infect healthy ones. The difference appears to be as to the effects of heredity and this question has been complicated by mixing up with it the occurrence of congenital cases.

Before Koch discovered the baccillus cases of tuberculosis were observed to run in families, and the explanation offered of this fact was that the disease was hereditary—in the same way that "roaring" in horses is hereditary. This word "hereditary" signifies the transmission of a "quality" which developes at some time after birth, or of a "tendency" to some material peculiarity. The colour of children's eyes is hereditary, but all children are born with eyes of the same colour. The colour of hair alters very much after birth, but the final colour is very much affected by heredity. One of the strongest reasons for calling consumption hereditary was the fact that new-born children did not show it but that it developed in families and proved fatal at about the same age in each member—years after birth. When disease is evident at birth the term congenital is applied, but this is quite different from heredity. I am not aware that any one has denied that tuberculous parents may beget offspring which are born with tuberculous disease. The congenital disease (when the disease is undoubtedly a contagious one) may be due to fœtal infection, and this is just the point which has to be decided. It is quite clear that the mother who suffers from tuberculous disease of the generative organs may infect the offspring before birth. It is not clear that the mother who suffers from tuberculous disease of some other organ does infect the offspring either congenitally or hereditarily. This is not a point to theorise about or on which to give a positive opinion founded merely on inexact observation. It is distinctly one for careful experiment and requires the practical test of breeding from diseased mothers under conditions which entirely eliminate the possibility of contagion or infection. This test has been carried out by Professor Bang of Copenhagen. He has reared calves from tuberculous mothers. From the instant of their birth every precaution has been taken to prevent contagion. These animals have been tested with tuberculin at various times, they have been killed and carefully examined after death and, with one or two exceptions, no sign of tuberculosis has been found. The experimental farm where this has been done is in existence and has been carried on for four years. Bang's results are not assertions—they are practical facts open to observation, and must be accepted as facts. I venture to think these facts carry the inference that when tuberculosis is found in the offspring of a diseased mother it is due to direct infection and not to hereditary transmission. If this were not so we should certainly find in the older animals, bred by Bang from diseased mothers, a large number tuberculous.

When we come to cases, reported by good practical observers, of calves infected by tuberculosis, not through the female, but through the male parent there is more difficulty. I do not know whether any exact experiments have ever been made in breeding from healthy cows with a tuberculous bull. Mr. Macgillivray says "There are any amount of instances in which the introduction of a tuberculous bull into a previously healthy herd has been followed by the most disastrous results." This may be accepted if we are sure the cows were "previously healthy." But Mr. Macgillivray tells us he has no experience of tuberculin and therefore it is impossible to accept his instances as being those in which no previous disease is certain. Nor is it possible to accept a statement that a bull cannot by contagion have infected a herd to which he has had access, unless his whole stay in that herd has been under the constant supervision of a trained observer.

The cases reported by Mr. Ironside are not given in sufficient detail to warrant any opinion being based upon them. The condition of the cows is one only of supposition. He does not say if the bull, brought to the herd in the spring and so diseased in the autumn as to be clinically apparent, was unable to have transmitted disease by infection. The second case is even more uncertain because the bull was visibly diseased when introduced to the herd and died of general tuberculosis after being used for one season.

I note that Mr. Ironside uses the remarkable phrase "I fail to see any good purpose that can be served by trying to prove that tuberculosis is not a hereditary disease." Will he pardon me for saying that this failure possibly accounts for his want of exactitude in noting facts and drawing conclusions. If tuberculosis is only transmitted by contagion he is right in his belief that "Any herd can be cleared of the disease." If however tuberculosis may be transmitted by heredity (*i.e.*, not existing in an animal at birth but developing in after years from some maternal or paternal influence) how can we detect it, and how ever get rid of it? Another good purpose, worth attaining, depends upon the proof of the hereditary nature of this disease. If it can be shown that a diseased cow may produce a healthy calf, it is not necessary to destroy a very valuable pedigree cow. With extra care and intelligent direction her race may be safely perpetuated and her owner saved from irreparable loss.

I confess that my reading and experience lead me to think that when we put aside the congenital cases due to direct infection there remains no logical argument in favour of heredity as a means of transmission.

Perhaps Mr. Macgillivray will oblige by saying upon what he founds his statement that "We are told that tubercle is spread by infection, contagion, and inoculation, *but never congenitally*." I am unable to trace such an assertion beyond the columns of Mr. Macgillivray's own article.

C. T. S.

ROYAL VETERINARY COLLEGE.

The session 1896-97 opened at this institution on Thursday, October 1st. There was a full entry of new students and an extra large attendance of old graduates, with many friends and practitioners.

The opening lecture was given by Professor Macqueen. The Earl of Crewe occupied the chair, and the Governors were represented by Sir Nigel Kingscote, Bart., Prof. Brown, C.B., and Colonel Lambert, C.B.

Professor MACQUEEN said that there were some very important facts which had a direct bearing upon the career of the student. What had to be done should be done earnestly; time was precious, opportunities were limited, money was valuable. Therefore they would not be justified in squandering money, neglecting opportunities, or wasting time. In the very old days veterinary practitioners were regarded as a special race; addicted to original expletives, given somewhat to phonetic spelling, to chewing straws, and to carrying the never-failing ash plant. Whether or not such features ever lived outside of imagination no one knew, but there could be no doubt that the race was now extinct. Veterinary surgeons to-day were very much like other successful professional men, they had the usual endowment of the higher virtues which they practised constantly. Their general knowledge was as good as that of their neighbours, and their professional attainments left little to be desired. They required perhaps more than other men, patience, courage, nerve and dexterity, and to succeed in practice they must be rich in observation, common-sense, and tact of the better sort, not that counterfeit plausible deception which might send reputation up like a rocket only to fall like the proverbial stick. To the question, What is a veterinary surgeon? the answer should be, one skilled by special training in the treatment of animals in health and disease. With regard to the training, twenty-one years ago the preliminary test of general education was a mere appetiser which everyone took heartily. But if frugality was the motto twenty years ago, surely prodigality was the watchword to-day. Yet dissatisfaction was sometimes expressed. Notwithstanding an extended curriculum, more exhaustive teaching, and the advantage of supplementary practice, to say nothing of the vastly increased opportunities and of greater facilities for acquiring knowledge, the complaint was made that students learned less now than formerly. The voice was Jacob's voice, but the hands were the hands of Esau. Everyone regretted that the supply of diseased cattle, sheep, and pigs was unequal to the demand. He would go further and say that if anyone would suggest a means whereby a well-stocked farm could be set down successfully in Camden Town, he would not go unrewarded. But in spite of the absence of a super-abundance of sick cattle, sheep and swine, the pre-eminence of the present course of instruction could be defended against any champion of the alleged superexcellence of the past.

Professional examinations were not conducted by the teachers of the students, but by independent examiners appointed by the R.C.V.S.—the profession's Parliament, which sat at 10, Red Lion Square. Too often the Royal Veterinary College was confounded with the R.C.V.S. The distinction had some importance and should be better known. The Royal Veterinary College was the pioneer veterinary institution of this country; it laid the foundation of their science and it gave the veterinary surgeon his name, and in simple justice it may be acknowledged that the development of the veterinary profession, its progress and prosperity, were largely owing to the foresight, liberality and spontaneous efforts of the long line of noble and distinguished governors of the Royal Veterinary College. In 1844 the R.C.V.S. was called into being; it was incorporated some 14 years before the corresponding body of the medical profession. From its incorporation till 1881, the only function performed by the R.C.V.S. was the examination of students. In 1881, when the Veterinary Surgeons' Act became law, the R.C.V.S. took charge of the decorum of the profession, and subsequently, with more confidence in its powers, gradually raised the standard and increased the number of examinations. Quite recently the responsibility of fixing the attainments in general education of intending students was assumed by the same corporation which now regulated and conducted the professional examinations, granted diplomas, and kept the Register of veterinary surgeons.

Touching the education of veterinary students no one could fail to appreciate the effect upon their future of the recent improvement in the preliminary examination. But that reform was not obtained without opposition. It was held that the higher standard would bar the way to many deserving men who might otherwise enter the profession with no discredit to its members. That objection contained the usual grain of truth, but it took no note of the cheapness of education, which left no reasonable excuse for ignorance. They had been told that poverty in education was no crime, but he confessed that it was very inconvenient. The true student was never baulked by a difficulty; given time, enthusiasm, and its complement, brains, no ordinary preliminary examination would stop his progress. It was not wise to predict without knowing, but it might not be long before a degree in Arts would be required as a condition precedent to the registration of medical students. Should that happen, the R.C.V.S. might put its initiative faculty to work and—he need not say what would follow. Meanwhile those who were responsible for the general education of veterinary students should bear in mind that the recent advance in the preliminary was probably only the beginning of further extension. Professional examinations when first instituted were intended to ascertain the progress made by the student in his studies, and whether he had ascertained sufficient information to fit him for practice. Now, examinations seemed designed to test the agreement of one man with another as to certain symptoms, lesions or other phenomena. If the two concerned happened to agree as to the appearance, function, or fate of something which possibly neither had ever seen, one was made happy; but should they disagree, owing perhaps to one having failed to see the thing in question or its exact image in the same condition as the other saw it, one was made unhappy. He need hardly say that the happy or unhappy one was the student. Few men who had not been teachers made satisfactory examiners; they improved no doubt with practice, but the cost in students' scalps was dear. Examiners generally erred by expecting ripe answers from raw heads; they might know that facts were stubborn things, but they preferred opinion, the student's opinion, although they might disregard it in practice. They forgot that questions were sometimes ambiguous and that terminology might grow out of date if not out of joint. Some examiners were pleased with short or index answers, but others, insisting upon the whole contents, were only satisfied with answers constructed after the redundant style of Lord Eskgrove's judgment in a case of the murder of a soldier by stabbing—"and not only did you murder him, by

which he was bereaved of his life, but you did push, or thrust, or pierce, or project, or propel, the lethal weapon through the band or the belly-band of his regimental breeches, which were His Majesty's." (Laughter and cheers.) He was glad, however, to be able to say that the examiners of veterinary students were generally very fair, if occasionally leaning to inconsistency in their awards. At their examinations honours were given to students who gained more than 60 per cent. of the marks, but the most remarkable feature in connection with that point was that honours diminished as knowledge grew. At the first examination students scored well, at the second not so well, at the third they scored badly, and at the final they seldom scored at all. He would not attribute the fewness of honours awarded in the "C" and final examinations in July of this year to the defective knowledge of the students nor would he admit that the teaching of the schools merited no better results, although it had been hinted that teachers were only human if examiners were divine. (Laughter.) But when he stated that within two or three weeks after the July examinations two of their un-honoured students gained nearly full marks, and the first and second places in the FitzWygram competition—a much more trying ordeal—it might be wondered what would be the cause of their comparative failure before the examiners of the R.C.V.S. Leaving that question he would refer to some of the subjects set down in the examination schedule of the R.C.V.S. Although the instruction given at the Royal Veterinary College was necessarily based to some extent upon the requirements of the schedule, the teachers were bound to cover more ground than was ever gleaned by examiners. The governors of the Royal Veterinary College endeavoured to provide the very best education that could be got to enable students to pass their examinations with credit, and to practise what they professed to the public satisfaction. Whether or not the time and energies of students and teachers as at present husbanded completely realised expectation, others must judge, but the present exigencies of life with no immediate prospect of an alarming increase in its span would seem to suggest that the direction and limitation of studies were from the very outset to be determined by the use to be made of them in the future. All knowledge was good, and general culture excellent, but encyclopœdic learning had no market even were it possible to the ordinary man. Proficiency in the art and science of veterinary medicine was what they required, and to attain that they must be content to remain more or less ignorant of many branches of knowledge. Specialisation was all-important; their specialism began and ended with the care of animals in health and disease, and students should be examined, thoroughly examined, with that prime object constantly in view. What was the use of much of the chemistry now taught to meet the examination? Did the veterinary surgeon ever require to make sulphuric acid or pig iron? Did be ever trust his own analysis of urine or milk, or when about to disinfect a cowshed, must he know how many cubic feet of gas would rise from a ton of burning sulphur? By all means let them have an examination in chemistry—physiological, pathological, and pharmaceutical chemistry, the chemistry of foods and of the farm, not the chemistry of chemical works, ironworks, print works, or gasworks. Let them have an examination in the chemistry which would be helpful to them in their studies, and of use in later life. With regard to botany, a few years ago he had held the hope of knowing something of it, structural, functional, and systematic—from the bulrushes which held Moses for a time, to the willows by the brook. (Laughter.) But the immensity of the task, not to speak of its seeming lack of utility, caused him to resign his effort to become a veterinary botanist for another and less arduous pursuit. What could be said for the retention of botany in the examination schedule? Should not the twenty or so poisonous plants be given wholly to toxicology? The fodder plants belonged to hygiene which took cognisance of their feeding values; the medicinal plants formed a considerable part of materia medica, the fungi and algæ of importance to veterinary surgeons belonged to bacteriology. Excluding those groups, many hundreds of British species would be left, besides plant structure, physiology, and classification, but to the veterinary surgeon what was the purport of the structure of a tree-trunk, the vagaries of roots, or the variations of leaves? It was pleaded that botany was a splendid mental drill and taught students to observe. Let both be granted. Did not the schedule contain other subjects of even greater usefulness, which furnished not only exercise for the observation but information which the student must retain. Had anatomy lost its purpose? had physiology no secrets, pathology no mysteries? Would not observation give better results if cultivated a little more in the dissecting room, the post-mortem house, the loose-box, or in watching lameness? If there was so much to learn and so little time to learn it, why trifle by the way to study flowers? Why not begin at the outset to concentrate observation on the things that *must* be observed? The lecturer then proceeded to enumerate the various departments of professional work into which the student might enter. He claimed that their diploma, like a note of the Bank of England, would carry its face value wherever they might go. Wherever they went they would find competition, which was a good thing for good men. They should not be discouraged by the literature of prediction. Already their pessimist friends, with a pre-vision worthy of Balaam's ass, had seen disaster to the veterinary profession in the approaching autocar. The fate of the profession had been sounded; it was to sink with depressed agriculture. Could a better companion be found? Agriculture was still the backbone of England, somewhat anchylosed perhaps, but still the backbone—(laughter and cheers)—only made stiffer by foreign competition. In the continued prosperity of agricultural exhibitions, where was the indication of any danger to the veterinary profession? Wheat had fallen in price, yet the area of wheat-growing land had considerably improved of late. Harvest thanksgiving services continued—(laughter)—in spite of low prices and the absence of the too conscientious Scotch farmer who "did not care to approach His Maker in a spirit of sarcasm." (Laughter.) The suppression of pleuro-pneumonia and other contagious maladies of home stock, the restrictions upon the importation of cattle from infected countries had imparted confidence to the farmer. More attention was now given to the breeding of farm animals, and veterinary surgeons had little to fear from the fall in wheat so long as the present prices of cattle, sheep and horses were maintained. But he would not be thought to suggest that there would be no difficulties—disease, accident, and sudden death would have to be investigated and satisfactorily explained. They should not give in at the first attempt to diagnose an obscure case but should persevere and keep their own counsel; the man who once mastered the art of keeping his mouth shut when he had nothing to say could always command respect. (Laughter.) Sooner or later they would meet with men whose word was as good as their bond—let them prefer the bond! (Laughter.) They should keep up with the times, buy the latest books, and not forget the weekly, monthly, and quarterly journals. They should read through and round their science, not clinging to old ideas which had been exploded, nor to methods which had been superseded, not rejecting the old merely because it was old but retaining the useful and the true. If promoted to the Council of the R.C.V.S. let them take the epistle of James as a rule of conduct and think long and earnestly of the needs of their comrades before attempting to legislate for them. Let them raise the popular taste if they could, but not give way to low

opinion. They should try to fulfil their own ideal in a profession for which there was a great future, and the usefulness of which the public had not yet fully measured. A faithful, assiduous and efficient veterinary surgeon would surely find his reward, if not in material prosperity, in the acquisition of learning, in the consciousness of good work well performed, and in the final approbation—the "well done!" of the Great Master. (Loud and prolonged cheers.)

The CHAIRMAN, in moving a vote of thanks to Professor Macqueen for his instructive and clever address, said that the past year had been a most interesting one in the College, in which the result of the changes recently made were beginning to be appreciated—the increase in the term of studentship and the raising of the standard of the preliminary examination. It was gratifying to note that the fears which had been at one time entertained as to the success of the innovation were proved to be groundless. The resolution was then carried by acclamation.

VETERINARY SOCIETIES.

SOUTHERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

A meeting was held at the Royal Hotel, Southampton, on Thursday, September 24th, under the presidency of Mr. J. T. King. There were present Messrs. J. F. Simpson; J. W. Barford, Southampton; J. B. Tutt, Winchester; C. Pack, hon. sec., Lymington; E. Whitley Baker, Wimborne; C. Carter, Guildford; H. Hall, Southampton; and W. J. Browning, a visitor.

CONGRATULATIONS TO HER MAJESTY.

The PRESIDENT said before the business proper was commenced there was one important duty for them to fulfil, which was to send a telegram from that Association to their Sovereign. (Applause.) He thought as veterinary surgeons and loyal Englishmen they should do so. They met together in small numbers but he was sure in such an action they would be expressing the general wishes of their professional brethren in the Southern Counties. (Applause.) He was sure there would not be a dissentient voice to sending a telegram congratulating Her Majesty on her unprecedented reign over them and at the same time expressing the hope she might be long spared to continue that reign over that wonderful nation and land. (Applause.) It was then decided to forward the following: "That this meeting of veterinary surgeons begs to offer its loyal congratulations to Her Most Gracious Majesty the Queen on having attained a period of reign exceeding that of any of her predecessors in this our beloved country, and hope she may be long spared to reign over us." The resolution duly signed by the President was forwarded to Her Majesty at Balmoral.

Mr. BARFORD, on behalf of Mrs. Barford and himself thanked the Association for the kind vote of condolence forwarded them during their affliction.

EXEMPTION FROM JURIES, AND FEES.

On the minutes (which included resolutions on the above) being read,

Mr. SIMPSON said it was worthy of note that in the reports of the various associations issued since the last meeting it appeared that those associations were of the same opinion as themselves with respect to their exemption from jury service. He had had no opportunity of fulfilling the promise he made at the last meeting to bring the matter officially before the Royal College, owing to there not having been a meeting since. A meeting would be held on October 17th when the resolution passed by that and other associations would be laid before the Council, who might refer it to a committee to ascertain what course to adopt.

The SECRETARY stated a circular letter was drawn up by the President and himself and sent to the various associations. The Secretary of the Royal College had acknowledged receipt of a copy and said it should be laid before the Council.

Mr. SIMPSON said he thought pressure should be brought to bear on those gentlemen who promised to take the matter up, asking them to fulfil their promise.

The SECRETARY said he had heard from the Secretary of the Yorkshire Association stating the letter had been considered and it was unanimously resolved to support the views of the Southern Counties Association on the matter. Professor Macqueen wrote stating the matter was laid before the Council of the N.V.A. but no action was taken in the matter. The Lancashire Association was unanimously agreed to bring the matter forward with a view to discuss and support same. The Secretary of the Central Society wrote stating he would bring the matter before their Council. He regretted the session had just been completed, but deemed the matter so important as to at once move in the matter and do what lay in his power to assist the Southern Counties in what he considered a question of vital importance. The Secretary of the Royal Counties wrote stating the Society unanimously resolved to take similar steps as the Southern Counties.

The PRESIDENT said from the replies read it was evident the question had been well received.

APOLOGIES.

Apologies for unavoidable absence were received from Sir Henry Simpson, Prof. Pritchard, Messrs. T. B. Goodall, Wheatley, and J. Burden.

VOMITION IN THE HORSE.

By J. B. TUTT, M.R.C.V.S.

My reasons for bringing the subject "Vomition in the Horse" before you are, to hear your opinions upon perhaps the highly controversial question as to whether it is a symptom solely of a rupture of one of the coats of the stomach, and if so whether vomiting takes place anterior to the rupture of the muscular coat of that organ. Further, to ask if any of you recognise a condition unassociated with rupture, but accompanied by persistent vomiting, which I shall presently describe. And lastly I think the subject bodes well for a good discussion which, allow me to say, is the chief object of this paper.

What is vomition? It is an involuntary act by which some of the contents of the stomach—chiefly the fluid portion—are expelled from the stomach into the œsophagus and nasal chambers and out at the nostrils of the horse.

Let us glance briefly at the anatomical structure of the stomach. It is composed chiefly of two coats, an external muscular—whose fibres are arranged in three different directions, longitudinal, circular, and oblique—and an internal mucous coat, which is divided into the cardiac and pyloric portions. The cardiac portion is simply an extension of the mucous membrane of œsophagus and is in such quantity that when the stomach is empty the mouth of the œsophagus is closed by it. To this latter anatomical condition the inability of the horse to vomit, except under grave conditions, such as rupture of the stomach walls, is supposed to be chiefly due.

The anatomical relations and position of the stomach of the horse show marked difference from that of the dog, an animal in which vomition takes place with the greatest ease. The stomach of the horse is as it were slung transversely in the abdominal cavity, it is far removed from the abdominal muscles, it is not held firmly to the diaphragm by the œsophagus which enters, too, not at its cardiac extremity but near to the centre of the lesser curvature. The pylorus is of large dimensions and admits of food being easily passed on; its mouth, too, is guarded by a powerful sphincter. The œsophageal opening on the contrary is small, so also is the channel of the œsophagus throughout, its walls are thick. Compare all this with the stomach of the dog. It is a simple bag as it were, directly in contact with the abdominal muscles, it is held firmly to the diaphragm by its œsophagus whose opening is large and funnel shaped, whose walls are thin, and whose channel is wide throughout and which enters the stomach at the extreme end of the cardiac portion, far removed from the pylorus situated at the extreme right extremity, whose opening is small.

I shall now ask you for one moment to consider the food of these two different animals. In the horse we have food composed of grain, chaff, hay, and so on, impregnated with water, which is certainly the worst kind of food to form a bolus to be expelled; especially so when we bear in mind the above anatomical conditions. The consequence being as I have noted in my definition that the pressure upon the contents of the stomach during the act of vomition expels chiefly the fluid matter contained therein. In the dog we have flesh, usually swallowed in large masses, we have a stomach that can be subjected to pressure all round, and what with its small pyloric opening, its large and funnel-shaped cardiac opening, its large œsophageal canal sloping in a direction towards the mouth during the act of vomition, by position the animal effects, we have the best possible conditions, both as regards food and anatomical structure and position for the ready ejection of the contents of the stomach.

What causes vomition in the horse? Can nauseous medicines produce it? I think not. But I consider the sole cause is irritation of the mucous membrane of the stomach or œsophagus, perhaps both, produced by unsuitable food, irritant poisons, or rupture of the mucous membrane of the stomach. In the former condition I regard it as important but not serious. In the two latter I regard it as serious, in fact a fatal condition.

Taking first the important but non-fatal condition. As a general rule one receives a message to attend a horse that is frothing at the mouth and vomiting through the nostrils. Upon enquiry you find the horse has just come off a laborious journey and has received little or no food until its arrival home, when it received the least suitable food for such a condition, such as grass, potatoes, rye, and clover—I am stating here exactly what I have found in practice. You find your patient with head hung down, froth hanging from its mouth, with a goodly quantity upon the ground or in the manger in front of him, sweaty patches upon the body, distressed breathing, the nostrils being usually widely dilated, visible mucous membranes injected, a temperature of 102, rarely exceeding 102½; a pulse small and about 60 or 70. Before, however, you have time to record the above symptoms, your patient arches his neck, crops his ears, depresses the nose and vomits from both nostrils. If you are sceptical as to whether this stringy mucous accompanied by a little food last partaken of is from the stomach, get on the left side of him and see the vomit travel up the œsophagus, or give him his drench, wait a few seconds and see some of it return. In one instance I noted a most peculiar emphysematous condition extending from the chest up the course of the œsophagus, which crepitated—as with black quarter. In this case he had returned from a long journey, was fed on potatoes, and was taken ill rapidly after. In a case that happened only last week, the pony had been sharply driven, and upon arrival home was turned out in a meadow to eat the rapidly grown young grass, in a short time he was in a condition as above described, vomiting stringy mucus and grass. He made a rapid recovery. It is quite possible an animal might have a naturally weak stomach and might be more readily affected than others, but I cannot admit for a moment that in all the cases I have had this predisposed condition existed. I only look upon one out of the many as of the above class, and he has suffered three times during the year. Long journeys, then, coupled with improper food I consider to be the cause of irritation to the mucous membrane producing gastric catarrh. Irritant poisons or rupture of the mucous membrane of the stomach produces acute inflammation of this membrane.

What is the character of the vomit? It is of a watery nature having a peculiar acid smell, accompanied by small quantities of the solid parts of food. Compare this with the stringy mucus noted in the last condition. The other symptoms are an expression about the face painful to notice, distressed breathing, profuse cold sweats, acute pain, tucked up condition of abdomen, deeply injected visible mucous membranes, the very small and rapid pulse are the chief fatal symptoms, which I regret to say I have noted by far too many times. Irritant poisons are either administered accidentally or intentionally, or by the ever-wise horsekeeper who, as is well known, often gives arsenic to improve the coat.

How is rupture produced? By the tympanitic condition of the stomach followed by the animal falling violently down in his box. On making post-mortems upon horses dead of the bowel complaint I have often been struck by the tympanitic condition of the stomach, although there has been a comparative absence of tympany in the bowels. Add to this the violent concussion produced by the animal throwing himself down, and I think we have a condition more than sufficient to account for the rent. I am quite willing to admit that in some cases of rupture we might have structural disease of the stomach, but in the vast majority of cases we have nothing of the kind.

Is vomition prior to the rupture? This depends upon the coat affected. If there be a rent in the muscular coat I regard vomition as impossible, whereas a rent in the mucous membrane would be more than sufficient to account for the vomiting—you would have in fact an acute gastritis.

I will here shortly record a case of arsenical poisoning which occurred in my practice not many months ago. Upon arrival at the farm I found the horse in a very bad state indeed, it was a case of acute gastritis producing persistent vomiting for several hours, this ceased however some hours before death, which took place some 30 hours after the attack. Upon making a post-mortem I found the stomach ruptured—both coats. Can it be contended for one moment that the muscular coat contained a rent whilst this persistent vomiting was going on? I think not. To what then do I attribute the admitted difficulty of vomiting, and how is vomition accomplished in the horse? The difficulty exists from the small and thick walled œsophagus, the perpendicular manner in which it falls as it were from the right pillar of the diaphragm, entering the stomach not at its left extremity, but near its middle, the opening, too, being small and constricted, and the fact that it is impossible for the animal to get these parts into such a position as to admit of free vomition. How very different is this to the dog.

As to the condition of the mucous membrane at opening of œsophagus, I attach but little importance to this condition as far as vomition is concerned, from the fact that if the stomach is the seat of injury or disease it is either distended by food or by gas, and under such con-

ditions the mucous membrane is removed by the distension from the œsophageal opening. Vomition being accomplished by the contraction of the longitudinal fibres which dilates the œsophageal opening, assisted internally by gas or food, by pressure exerted upon the contents of the stomach, by its circular muscular fibres, its patent pyloric valve, by the downward movement of the diaphragm, the pressure of the bowels upon the stomach, by contraction of the abdominal muscles and by the eructation of gas. In an animal I had with rupture of stomach in August last, and which vomited some few times before death, it was noticed that for some time between each act of vomiting, gas would travel up the œsophagus and distend that channel, followed later by eructation and vomit.

Treatment of Gastric Catarrh. My first case puzzled me. I treated it wrongly, too, medicinally, commencing with sedatives—bismuth, bicarbonate of soda and opium—the consequence being the case did not make so rapid a recovery as I look for now. I now recognise the existence of some unsuitable food in the animal's stomach which is producing the symptoms observed. I therefore administer Linseed oil, tincture of Cardamoms and turpentine, followed in a few hours by the above named sedatives, which are continued at intervals of from 4 to 6 hours as the case requires. These are administered in cold gruel, the result being always highly satisfactory. The only thing in the way of food allowed for a few days are cold sloppy mashes and cold gruel.

The treatment of acute gastritis depends medicinally upon the irritant received, although the administration of agents to relieve pain and the administration of cold demulcent drinks will be beneficial to the patient. In these cases however I should regard recovery as rare, and in rupture of the stomach recovery of course is impossible; all that can be done here is to relieve the sufferings of our unfortunate patient.

From the above I hope I have made it apparent that although I recognise the difficulty with which vomition takes place in the horse I by no means regard it as so rare as I was taught to believe, neither do I regard it in the majority of cases as accompanied by grave lesions. But on the contrary in the majority of cases it is amenable to treatment. And further, the condition of the mucous membrane at œsophageal opening has little, if anything, to do with the difficulty of vomition in the horse. Further there are two conditions in which we have vomiting, one fatal, the other not necessarily so. That when the muscular coat of the stomach is ruptured I regard vomition impossible. Here I might have my attention called to the experiment where the dog's stomach was removed and a bladder fixed in its place and vomition induced. But bear in mind the large œsophagus of the dog and how well this artificial stomach can be subjected to pressure all round, the position the animal affects during the act which makes the condition more like an indiarubber ball slightly suspended and connected with an open canal, the least pressure on the ball being sufficient to expel its contents. All this is significantly absent in the horse.

In bringing this short paper to a close I may add that I have noticed the above symptoms during my short professional career and from them I have deduced the conclusions put before you, which I ask you to criticise. If you think them wrong please say so and put me, a young practitioner, on the right path.

Discussion.

Mr. Simpson thanked Mr. Tutt for his paper and for bringing such an interesting subject before them for discussion. He also thanked him for reminding them of the anatomical construction of the stomach and the parts connected with it. He, however, still held to the opinion he had arrived at some time ago that nature never intended the horse to vomit, and if it had the abdominal walls would have been differently placed. Again, if they looked at the cardiac end of the stomach to the other end of the œsophagus and remembered the construction of the small pyloric orifice they would see that if the horse did vomit it was a matter of great inconvenience and danger to it. Mr. Tutt had described it as an involuntary act. When it did take place, which was rarely, the horse knowing the amount of inconvenience it occasioned avoided it as much as possible. Mr. Tutt had described certain acts which had come to his notice where the animal was affected with vomition as he described it. He was in the best position to say if it was a true case of vomition, but from the symptoms described he ventured with every respect to think Mr. Tutt was mistaken in his case. He was of opinion there must have been some defective condition of the œsophagus, and the symptoms observed were simply those which generally accompanied defect in the thoracic portion of the œsophagus. He was of opinion the symptoms of an occasional discharge from the nostrils and mouth were caused by the lodgment of some food in the thoracic part of the œsophagus. Mr. Tutt described it as the non-fatal part of vomition, but he hardly recognised it in the non-fatal form. When they got it from the stomach itself then there was a serious defect of that organ and death always followed. They must all agree with Mr. Tutt that vomition was impossible if the stomach and muscular fibres were interfered with by an extensive rent.

Mr. Carter said he had had several cases of vomition in horses but the major portion of them occurred during constipation or inflammation of the bowels. Oil and gruel had been poured in and the stomach having become immensely distended vomition had taken place. He had generally found that laminitis had resulted. He did not think he had ever seen a horse vomit with a ruptured stomach, but they got those symptoms when a horse was choked. He had had several cases of vomition but it generally finished up with laminitis or purgation.

Mr. Barford said he had had one or two virulent cases which, however, had been connected with peritonitis or inflammation of the bowels. Unfortunately he had never been able to save either of his cases which, however, were not taken in the earlier stages. He was of opinion that vomition was rare, and in the majority of cases ended fatally.

Mr. Hall remarked that as far as his experience went he was at one with Mr. Simpson in thinking it was a rare occurrence that the causes of vomition were amenable to treatment. He was also of opinion that in the case mentioned by Mr. Tutt where there was emphysema in the neck it must have been due to some defective condition of the œsophagus. The cases which had come under his personal notice had always been due to the administration of hellebore, which in some parts of the country was a favourite treatment for hunters after being taken up from grass. The stud groom went to the chemist and got hellebore balls, and when water was given after, a spasmodic condition was set up and vomition followed. Such cases when dealt with by some demulcent, such as linseed oil or new milk, were amenable to treatment. In one case the animal certainly vomited and recovered, but about twelve months afterwards it was taken with the same symptoms and died. In that case there was peritonitis and rupture of the stomach which had taken place some hours before, the rupture being the cause of the peritonitis. That was the only case which he knew had recovered (which it did the first time) except cases which had been due to poisonous substances or hellebore.

Mr. Whitley-Baker having thanked Mr. Tutt for his interesting paper, said his experience of vomition in the horse was that—as Mr. Carter had said—it did not occur when a ruptured stomach was the whole and sole cause

of death. His experience had been that ruptured stomach had occurred when there was volvulus, especially when the twist had been near the pyloric portion of the stomach. In this condition, if the stomach was full, the animal strained violently, and with the excessive exertion the obstruction to the opening of the cardiac orifice was overcome and a portion of the contents was vomited. In some cases he had noticed a little watery fluid pass from the stomach, but he must say he had never been able to bear out by experience the opinions of some of the writers of old that vomition was a sign of a ruptured stomach. His experience had been that a truer symptom was when the animal sat on its haunches more like a dog to ease the pressure on it. With respect to the treatment his experience had not been the same as Mr. Carter's. He had seen cases recover in choking, but when he had had any amount of vomition the cases had in fifty per cent. been fatal and were due in the majority of cases to twisted bowel. In those cases he had seldom obtained a recovery, whilst Mr. Carter informed him his cases had all recovered. He thought in cases of recovery it was due more to the bowel righting itself from a twist than to their exertions.

Mr. PACK said he thought the theory that ruptured stomach was necessary to cause vomition was exploded, and he was prepared to state that a rupture or any lesion of the stomach was not necessary to cause vomition. His experience of vomition cases was limited, and three out of four cases were fatal. About twelve months since he saw a colt which had been running out at grass. The animal was certainly vomiting, and had spasms giving indication of choking. He administered some oil, which was not returned, but some grass food was returned. The animal did not at all appear *in extremis*, and he left some sedative medicine and liniment for the neck, but when he saw it the next morning the colt was dead. On opening it he was surprised not to find something wrong in or near the œsophagus or stomach, but eventually found that the intestines in two places had fallen over and formed a half twist. There was an accumulation of grass at the twist kept back by the small orifice, but the oil had found its way through. All he found was the twist and an accumulation there of undigested food through which fluids appeared to have passed. About six months before that he was asked to see a cart horse which certainly was vomiting through both nostrils, heaving a good amount of slushy food into its manger, and without any spasm. It made good progress during the day; he ordered it to be given no food so as to let the stomach have a rest. It recovered. Some ten years ago he saw a horse which had gastritis after a severe attack of colic. Vomiting commenced, and the horse soon died. On opening it he found it had gastritis and a ruptured colon as well.

The PRESIDENT said his experience was that vomition in the horse was rare and he had seen very few cases, which generally were due to colic or enteritis. As to vomition being a symptom of rupture he did not think it could be. Cases of vomition he thought were as a rule to be traced to indigestion and colic, and the very few cases he had seen had been fatal. He had found rents in the stomach, and the question which occurred was whether vomition occurred before or after the rupture. He should like to hear more about the treatment in cases of vomition. He should think the treatment would be to clear the offending matter or let the stomach rest.

Mr. SIMPSON said since he had been listening to the other speakers a case had occurred to him which had come under his observation. It was an interesting and somewhat amusing case, and bore out the view he had already expressed with regard to the condition of the thoracic portion of the œsophagus. After the animal had its gruel after hunting, a large swelling took place in the neck, which disappeared a short time after the animal finished drinking. It would then take another drink with the same result as before. He tested the horse with water and there was a swelling at once in the œsophagus which, however, gradually subsided. He distended the œsophagus to an enormous extent upon which a quantity of slush was emitted into the manger. The animal was killed, and on examining it he found unmistakable evidence of paralysis of the œsophagus in this position. If that condition existed in that portion why might it not in the thoracic portion? If it did it would account for the symptoms described by Mr. Tutt and Mr. Pack.

Mr. PACK mentioned the case of an old pony which had stuffed the œsophagus so completely with meal that it could be easily felt on the left hand of the neck. There appeared to be no symptom of choking.

Mr. WHITLEY BAKER pointed out that the medical profession generally considered vomition was nearly always due to the obstruction of the bowels, and he thought as a general rule veterinary practitioners might take a valuable hint from that.

Mr. TUTT was unable to reply to the various speakers having to leave before the discussion was completed.

NEW MEMBERS.

The PRESIDENT welcomed Mr. Hall amongst them as a new member of the Association, and proposed as a member Mr. F. Spencer, of Basingstoke.

MORBID SPECIMEN.

Mr. E. WHITLEY-BAKER produced a fine specimen of a cystic calculus which he had taken from a mare belonging to Dr. Batterbury, of Wimborne. When he first discovered the calculus he thought it could be taken away easily. The operation was performed on the mare whilst standing and the animal gave him no trouble afterwards. The highest temperature was 101°, and she was at work within a week. Previous to the operation the mare, after a journey, strained violently when passing urine, in which was blood and pus.

Mr. SIMPSON congratulated Mr. Baker on the success of his operation, and said such operations gave the profession an excellent name. In a calculus he once exhibited there was a much smoother appearance than in the specimen before them, whilst there was a distinct depression. He thought they must both have been lodged in the neck of the bladder.

Mr. BAKER said he did not think the specimen in question was ever lodged there as he found it rather difficult to get it there for extraction. If it had lodged there he thought it would have been more easily extracted. The fact of the animal straining only after a journey he attributed to the movement causing the calculus to roll about in the bladder and so set up irritation of the lining membrane.

Professor MACQUEEN'S scheme for amalgamation with the National Veterinary Association was next introduced and the matter was freely discussed, and in the end it was unanimously agreed to support the scheme.

On the proposition of Mr. Carter, seconded by Mr. Simpson, it was decided to hold the next meeting at Southampton in March next.

A vote of thanks to the President for taking the chair concluded the business, and the members afterwards dined together, spending a very pleasant evening.

C. PACK, *Hon. Sec.*

EXTRACTS AND NOTES.

TUBERCULIN AND LEGISLATION.

It is stated by *The Veterinary Record* that *The Live Stock Journal* has made quite a positive stand against any legislation for tuberculosis in cattle. We beg to contradict the assertion. The only definite and practica-

ble proposal for legislation that has yet been made in this country—viz., the compensation of butchers for animals that, though purchased *bona fide* as sound, have been seized and condemned in the interests of the public health—has all along had our support. Other projects—such as the "stamping out" of tuberculosis in the same way that foot-and-mouth disease and pleuro-pneumonia have been suppressed, and the adoption of the discarded Massachusetts plan, which consisted in the compulsory use of tuberculin and the slaughter of all animals that reacted to the test—have been adversely criticised in these columns, but then they have been quite as quickly abandoned by those who propounded these ideas. Moreover, we have not been able to see any special advantage as likely to accrue from the adoption of the Danish plan, with which the name of Professor Bang is associated, because we do not believe that a voluntary method so incomplete in its application will prove successful; and we have steadfastly argued that before there is a compulsory and universal application of the tuberculin test there should be conducted in this country exhaustive experiments to prove exactly what are the effects of injecting that specific into the systems of animals.

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In the meantime we have continuously advised breeders to weed out from their herds all suspicious animals, and to manage their cattle strictly in accordance with the laws of hygiene. We believe that a great deal can be done by these voluntary efforts. When a practicable scheme for diminishing tuberculosis is brought forward, breeders will, we do not doubt, give it their loyal support, and without that support any plan that is attempted is fore-doomed to failure—a fact which some advocates of the tuberculin test usually overlook.—*Live Stock Journal.*

[We very gladly reproduce this statement from our contemporary and regret that we misunderstood its position. The journal approves of compensating the butcher—so do we. The journal is adverse to "stamping-out" tuberculosis by the methods applied to foot-and-mouth and pleuro-pneumonia—so are we. It advises breeders to weed out all suspicious cases from their herds—so do we, but we should like to guard other herds from these casts.

The Journal thinks tuberculin has not been sufficiently tested to prove its effects. The veterinary profession—save Prof. Brown—thinks it safe and reliable.

"A practicable scheme for diminishing tuberculosis" we venture to think is to be found in the adoption of the existing law as applied to glanders.

The stock-owner gave his loyal support to the measures adopted for suppressing foot-and-mouth and pleuro-pneumonia about ten years after the measures became law. He will support a tuberculosis Act some day—but why wait?—Ed.]

BOYCOTTING CORNISH VETS.

The Western Daily Mercury says:—"In West Cornwall a peculiar state of things has come about in connection with prosecutions for cruelty to animals. There is in consequence just the possibility that some offences may go unpunished. At any rate, the Inspector for the Society will be seriously handicapped. It arose in this way. After veterinary surgeons had given evidence for the prosecution, they were reminded of it with awkward frequency by those likely to require their services. And when the cows fell sick or the horses went lame, someone else was called in. This meant serious financial loss, and the law of self-preservation led veterinary surgeons to ask the Inspector to forget them when next he had a case. We are assured that west of Truro there is not a single gentleman of this class now willing to help the Society to secure convictions. For the attitude the surgeons have taken, they are not greatly blamed. Circumstances drove them to it—reluctantly we hope. To appear as a witness on behalf of the Society meant perhaps a loss of £20 in fees. That was a matter not to be lightly thought of. But public opinion will condemn those who put the screw on the surgeons. It constitutes one of the worst examples of boycotting. If persecution could be justly alleged against the Inspector for the Prevention of Cruelty to Animal, the affair would wear a slightly different aspect."

A CASE OF FOOT-AND-MOUTH DISEASE IN THE HUMAN SUBJECT.

By John Glaister, M.D., F.F.P.S. Glasg., D.P.H., Camb., &c.,
Professor of Forensic Medicine and Public Health, St. Mungo's College, Glasgow.

In view of the increased attention which is being paid in these days to the diseases of the lower animals which are communicable to man the following notes respecting an attack of the above disease in the human subject will not prove uninteresting to the readers of *The Lancet.* Such cases are comparatively rare, and by reason of their rarity ought to be carefully recorded when encountered. The literature, too, of the affection is by no means copious, although it is sufficiently large to prove what is now unquestioned—that it is a disease which under certain conditions is communicable from the lower animals to man, while it leaves open to doubt its communicability from man to man. The facts of the case which came under my observation were as follows.

In December of last year I was asked to see a woman aged forty-four years. She was a person who usually enjoyed vigorous health. Her symptoms of illness at that visit were the following: She had a history of a rigor, a febrile condition (temperature 102° F.), a dry, furred tongue, anorexia, considerable thirst, and a general feeling of soreness of the muscles of the trunk and limbs. The room in which she lay was darkened on account of conjunctivitis of both eyes causing her to be unable to bear the light. In addition, she suffered from coryza to a slight degree and from a trifling cough. On the face and neck there was the faintest appearance of a rash, which looked not unlike the initial stage of the eruption of measles. In short, all her symptoms pointed to an attack of ordinary measles, which, however, she assured me she had had upon a former occasion. Next day the conjunctivitis had considerably increased and the conjunctivæ were beginning to assume a tumid appearance; the coryza also had increased and the nasal mucous membrane was also somewhat swollen. She complained of tenderness upon micturition. The appearance of rash on the face and neck had now nearly cleared off. The temperature was now 102·6° She had had a sleepless night, and she was very nervous. The most prominent symptom observable at this visit, and one of which she had not formerly complained, was a painful condition of the mouth, of which upon examination the whole of the mucous membrane was found to be in an inflamed and tumefied state. It had just the appearance as if it had been painted over with blistering fluid or as if she had washed her mouth with strong carbolic acid. This inflamed condition extended over the lips to the margin of the skin. In consequence of the tongue having shared the same inflamed and swollen state her articulation was difficult and thick, and the act of swallowing fluid had become both painful and difficult. A rash had now begun to show itself on the forearms, which consisted of circular and oval spots slightly raised above the level of the skin

(papules). These papules were comparatively few in number, and in respect of their position did not extend above the lower half of each forearm. In addition to this an unusual rash made its appearance on the palms of the hands and on the soles of the feet, which confined itself exclusively to these parts, there being, however, an occasional spot on the palmar aspect of the webs of the fingers and on the plantar aspect of the webs of the toes. But the incidence of the eruption on the palms and soles was the striking feature of it. The rash was composed of circular papules of a pinkish colour, which did not disappear on pressure. This undoubtedly indicated a purpuric character. This colour was not shared by the rash on the forearms, neither was any rash on any other part of the body.

The whole symptoms—the fever, the conjunctivitis with profuse watery discharge, the inflamed condition of the nasal mucous membrane (also with profuse coryza) the generally inflamed and tumid condition of the mucous membrane of the mouth and tongue, and the peculiar character and incidence of the eruption—did not consort with those of any disease I had met with in the human subject during about twenty years' experience in practice, and, consequently, at first were puzzling. I had apparently to deal with stomatitis of a peculiar kind with superadded symptoms of a kind unknown to me. Suspicion soon fell upon foot-and-mouth disease, particularly after consultation with some experienced veterinary practitioners who had had considerable experience of the disease in the lower animals. Inquiry was thereupon made regarding the patient's connexion with cattle, but there was found to be not any. She, however, pointed out that she lived very largely upon raw milk—in fact, she daily consumed considerable quantities of that fluid.

From this point onward the daily history showed increasing disturbance of the conjunctivæ, increased inflammatory action in the buccal mucous membrane, and changes in the appearance of the rash. The febrile condition remained active until the fourteenth day, although the forenoon temperature never rose above 102·5°, when it gradually subsided to about 100° or 100·5, depending apparently upon the condition of the mouth. It disappeared entirely about the twenty-first day. The history of the conjunctivitis can be summed up in a few words. The patient was completely unable to bear the light until the tenth day of the illness, when the inflammatory action began to decline, and by the fourteenth day it had practically disappeared. From the time that the generally blistered-looking condition of mucous membrane made its appearance, swelling of the cheeks ensued, and more particularly of the left side, although the blistered condition was equally apparent on both sides. When these vesicles became ruptured their bases appeared angry and raw, and upon these bases ulcers of varying size and depth supervened. As was probably to be expected, the ulcers on the lips were the most painful and most difficult to heal; at the same time several of those in the interior of the mouth were equally long in healing, particularly those situated on a line of the buccal membrane at which the teeth of both jaws met. These ulcerations were not entirely better until the end of the fifth week of the illness.

With regard to the subsequent behaviour of the rash, that part upon the forearms which became papular remained in this condition for about two days, whereupon some of the papules gradually assumed the form of vesicles which, soon afterwards subsided after absorption of the fluid, and from which the epidermis peeled off, or, in some few cases, the clear fluid of the vesicles became purulent in character, but which also became absorbed, a little desquamation ensuing. The rash upon the palms and soles behaved in a very similar way, but the process of conversion from papule to vesicle, and from vesicle to pustule, extended over a larger number of days, not unlikely due to the more thickened condition of the epidermis over these parts. The pinkish colouration of the spots at first was very striking, but it disappeared when the papule became a vesicle. The conversion above alluded to was more general in the rash of the palms and soles than in that of the forearms; and, as in the case of the forearm rash, so here, after absorption of the fluid contents, desquamation of the skin ensued. The process of desquamation was not active until about the end of the fifth week of the illness; neither was it general over the skin of the hands or feet. There was no internal complication in the case, so that by the end of the fourth week the patient was able to be out of bed for an hour or two; but even at the end of the sixth week she was not able to attend to her ordinary domestic duties.

As the case had a distinctly public health relation, I requested Dr. J. B. Russell, senior medical officer of health of Glasgow, to see the case with me while in its acute stage. He agreed as to the diagnosis. He was good enough to make enquiries regarding the milk supply of the family of the patient, but found himself hopeless to trace its ultimate source. The patient has been in good health ever since.

[We have re-published this case from *The Lancet* for the same reason that the author communicated it to our contemporary—"in view of the increased attention which is being paid in these days to the diseases of the lower animals which are communicable to man." The great difficulty in accepting the case as one of foot-and-mouth disease lies in the fact that no such disease exists, or has existed for very many months, in Glasgow. It is remarkable that when foot-and-mouth disease was prevalent—affecting, in some years, nearly every farm in the Kingdom—no well identified cases in man were reported.—Ed.]

The Royal Photographic Society.

The 41st Annual Exhibition of the Society is now open at the Gallery of the Royal Society of Painters in Water Colours, 5a Pall Mall East. There are 354 works exhibited, this being about 100 less than last year owing to more rigorous selection by the Committee. Over 1100 works were submitted. There are also a number of lantern slides and several groups of apparatus. Those of our members who delight in artistic work or who practice photography should endeavour to see the collection before it closes (Nov. 12). Admission 1s.

ARMY VETERINARY DEPARTMENT.

Extract from *London Gazette* of October 6th, 1896:

Vet.-Capt. William Alfred Crow to be Veterinary-Major. Dated October 2nd, 1896.

Vet.-Capt. D. C. Pallin has been transferred from India to the Home Establishment on 7th instant, and posted for temporary duty with 3rd Dragoon Guards at Shorncliffe.

Vet-Lieut. R. H. Holmes transferred from Aldershot to Dublin for temporary duty.

Vet.-Lieut. W. B. Edwards embarked for India 7th instant, in S.S. "Dilwara."

CORRESPONDENCE.

A CORRECTION.

Dear Sir,

I beg to draw your attention to a mistake in this week's *Record* in which the letters M.R.C.V.S. are printed after my name. I cannot yet claim any distinction not having passed the final examination of the R.C.V.S. —Yours truly, James Eadie.

October 3rd.

FEES.

SIR,

Having read the correspondence in *The Record* of Mr. Parr and Mr. Edwards "re swine fever fees" paid by The Board of Agriculture. I must say I quite agree with the former, and certainly think we are well paid for what we do for them.

The fee paid by the Hampshire Local Authorities to their inspectors (of which I am one) is fifteen shillings for a whole day, and seven shillings and sixpence for half-a day, and fivepence per mile each way; and as the fee paid by The Board is more than double, viz. two guineas per day and one guinea for half-a-day, and 6d per mile each way, I think there is reason to be satisfied.

Yours faithfully,

Newbury. E. C. HOWARD.

TUBERCLE QUESTIONS.

SIR,

Probably on receipt of my *Record* I shall find several able articles in answer to Mr. Macgillivray's remarks upon tuberculosis. I also should like to ask a few questions, and regret that owing to my being away upon a holiday I missed the chance of doing so sooner.

What is the value of the opinion upon any subject of a man whose reading of Prof. Almond's paper leads him to the deduction that it was written for the three purposes suggested by Mr. M.? One may be smart without being rude.

Does the question "Where did the brothers and sisters get it" (sic) display any intelligence when one considers the probable chances of "infection, contagion, and inoculation" to which they are submitted by constant contact during a long period of co-habitation?

Is it not a fact that a bull will often lick the mouth of a cow before the act of copulation? or at least the other parts of her body, which she or other cows or calves may lick afterwards. Do not cows lick the mouths of their calves? Can Mr. M. deny that tuberculosis is infectious by ingestion and by inhalation of dry spores? Why should not the disease have been spread by these means in the herd he speaks of?

Professor McFadyean is willing to offer a fair reward for a tuberculous testicle, both as a specimen for the College Museum and as one for instruction of the class of pathology. If Mr. M. would forward one, even though he may wish for no reward, he would be pleased by the gratification afforded the students by being shown a specimen that is apparently common in Banff and its surrounding district, but which is rare in my neighbourhood.

Why should the knowledge of a New York M.D. of whose existence most of us were completely ignorant until enlightenment by Mr. M. be matched against that of McFadyean? Has Mr. M. any idea of the M.D.'s evidence to prove that these infants died from being fed on tuberculous milk?

In the little tale that Mr. M. tells of the cats and the milk, he does not make it quite clear who the experimenters were. Are we to presume that he was one of them? Because if so, we are inclined to re-echo the last sentence of that paragraph. The experimenters, knowing the milk had a bad smell, tasted it; the cats knowing the milk had a bad smell refused to taste it. Sensible cats indeed!

I don't quite see the logic in the remark "The story about 1 in 10,000 bovine juveniles being affected congenitally with tubercle will not hold water."—because (?) it is an old story. I presume that is the meaning of the sentence?

Do the butchers in foreign abattoirs take every precaution to keep the interested people in the dark regarding the presence of any abnormality? Are there not veterinary inspectors?

I must be allowed to smile, though a country practitioner, at the remark "the country practitioner is the only party who can successfully settle the question as to tubercle or no tubercle in newly dropped or comparatively juvenile bovines."

Surely more calves are killed soon after being born in a large city than in most country places. But apart from that, supposing the ordinary practitioner, town or otherwise, were capable of taking the work in hand, what of the observer who is unfortunately ignorant of the use of a microscope or cultivating media? Surely the microscope is essential to the proving of the presence of tuberculosis?

That the "ego" of Banff will kindly condescend to give us yet more of the results of his experience and observations from and in nature and nature's doings to amuse us during the winter is the sincere wish of

W. B. JUN.

TUBERCULOUS CALVES—AN OFFER.

SIR,

To judge from some correspondence that has recently appeared in *The Veterinary Record*, one might suppose that the birth of a tuberculous calf is an every-day occurrence; and, indeed, if conceptional or intra-uterine infection is the main way in which the disease is spread, quite a large proportion of the calves born in this country must come into the world tuberculous. On the other hand, I maintain that not one calf in several thousands is born tuberculous, even in districts where from 20 to 30 per cent. of the breeding animals are tuberculous, and to show my confidence in the correctness of that assertion I hereby make the following offer:—

Until further notice inserted in these columns, I undertake to pay the sum of £1 for every tuberculous calf under one week old sent (carriage unpaid) to the Research Laboratory at the Royal Veterinary College. In each case the entire animal must be sent, and should my examination in any case show that the calf was not actually the subject of tuberculosis, its viscera will be submitted for confirmation of this diagnosis to Dr. Sims Woodhead, Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons.—Yours etc.,

J. MCFADYEAN.

Royal Veterinary College,
3rd October.

ADVERTISING.

DEAR SIR,

I had intended ignoring Northcountryman's letter as being one of personal spite, but seeing the letter in your last issue will state a few facts. Northcountryman must have been present at the show or could not have known about the indiarubber tyres and brass bells, and if present he must have known the gig was not shown in the tradesmen's turnout, although that is what he states. As to the indiarubber tyres I fail to see why they have been mentioned, or the bells either, as they are only what are generally used with silent tyres. His other remarks are of the same spiteful nature, so without further comment I enclose my card, and beg to remain yours,

A LOVER OF TRUTH.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. J. H. Meredith, E. C. Howard, W. Awde. C. T. S.

Bacteriology and Infective Diseases—Crookshank, *The Wellington Journal*; *The Western Daily Mercury*.